

HIGH DENSITY NANOSTRUCTURED INTERCONNECTION

A method and apparatus for forming an electrically and/or thermally
5 conducting interconnection is disclosed wherein a first surface and a second
surface are contacted with each other via a plurality of nanostructures
disposed on at least one of the surfaces. In one embodiment, a first plurality
of areas of nanostructures is disposed on a component in an electronics
package such as, illustratively, a microprocessor. The first plurality of areas is
10 then brought into contact with a corresponding second plurality of areas of
nanostructures on a substrate, thus creating a strong friction bond. In another
illustrative embodiment, a plurality of nanostructures is disposed on a
component, such as a microprocessor, which is then brought into contact with
a substrate. Intermolecular forces result in an attraction between the
15 molecules of the nanostructures and the molecules of the substrate, thus
creating a bond between the nanostructures and the substrate.